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EXAMINER

HARVEY, DIONNE

ART UNIT PAPER NUMBER

2643

DATE MAILED: 09/08/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/838,886

Applicant(s)

BACHMANN ET AL.

Examiner

Dionne N Harvey

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-6, 9-14, 16-23 and 25 is/are allowed.
- 6) ☐ Claim(s) 7, 8 and 24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 7-8 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Azima (US 6,188,775) in view of Azima (6,442,282).

Regarding Claim 7,

Shown in figure 6, Azima '775 teaches a tweeter comprising a light weight, freely carried thin sandwiched plate (2) having two thin, hard cover plates (21) with a core layer including a metal foil between them (see element 22; also see col. 3, lns 31-37); the sandwich plate being excited into multiple reflected bending waves; and at least one driver (68) wherein the driver is designed to excite at higher frequencies and the sandwich plate is designed for propagation of bending waves at low damping; the sandwich plate is freely supported by holding elements (in figure 3, see element 3) with low damping.

Azima does not specifically teach that the holding elements are designed to be low damping at higher sound frequencies.

In col. 4, lines 32-33, Azima teaches that the holding element (3) may damp the edges of the attached panel. Since the Applicant has failed to clearly define "low damping" or the range of frequencies which is defined by "higher sound frequencies" in the claim, these limitations have been given the broadest interpretation. Therefore, it is the Examiner's opinion that it would have been obvious for one of ordinary skill in the art at the time of the invention, to provide a suspension having *low damping* for the purpose of preventing excess movement in the panel at *higher frequencies*.

Azima '775 does not clearly teach that the core layer may be provided with zonal thinning and/or cutouts and may contain a spatially different distribution of elasto-mechanical properties.

Azima '282 teaches, in column 4, lines 5-11, that the core layer may be provided with zonal thinning and/or cutouts; and in col. 3, line 58 – col. 4, line 11, teaches that the panel can be imposed with crushing, selective skimming etc., which the Examiner interprets as reading on "spatially different distribution of the elasto-mechanical properties", as claimed; in col. 4, lns 11-13, Azima '282 teaches that the variations in thickness need not happen in a manner that will change the center of gravity for the system, which the Examiner has interpreted as performing said "crushing" in a basic pattern; and Azima further teaches in col. 3, lines 65-66 and in col. 4, lines 10-11, that the variation of thickness may be achieved by contouring/profiling, which the Examiner has interpreted as embossing.

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the teachings of Azima '755 and Azima '282 for the purpose of

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achieving a desired core thickness and subsequently achieving the desired vibrational frequency response for the speaker system.

Regarding Claim 8,

Azima '282 teaches that skimming, crushing or contouring the panel can be achieved without changing the center of gravity and therefore appears to teach that the bulges i.e., contouring/profiling is such that the maximum shear resistance is obtained in all directions.

Regarding Claim 24,

In column 3, lines 31-37, Azima '775 further teaches that the honeycomb matrix core layer may include a metal foil. In Figures 4-6, Azima '775 teaches a tweeter (68,70) comprising a light weight, freely carried thin sandwiched plate(2) which can be excited into multiple reflected bending waves; and at least one driver (68) wherein the driver is designed to excite at higher frequencies and the sandwich plate is designed for propagation of bending waves at low damping; the sandwich plate is freely supported by holding elements (in figure 3, see element 3) with low damping; the sandwich plate has two thin hard cover plates (21) with a shear resistant core layer (22) between them; and that the holding element (3) may damp the edges of the attached panel for the purpose of preventing excess movement in the panel at *higher frequencies*. While Azima'282 further teaches that variation of thickness may be achieved by contouring/profiling, which the Examiner has interpreted as embossing.

Allowable Subject Matter

Claims 1-6,9-14, 16-23 and 25 are allowed.

Response to Arguments

2. Applicant's arguments filed 06/07/2004 have been fully considered but they are not persuasive.

Regarding the Applicant's argument with regard to Azima 6,442,282, that "...The Spatially Different Distribution Is For A Different Purpose:"

The Applicant's argument specifically pertains to the rejection of claim 4. Claim 4 is now allowable due to its' dependency upon claim. However, the same limitation is recited in claim 7, which is still held as rejected over Azima (US 6,188,775) in view of Azima (6,442,282) and the Applicant's arguments are therefore addressed as follows:

It is important to note that the Applicant does not traverse the Examiner's interpretation of Azima '282's disclosure of "crushing to achieve contouring" and "selective skimming to desired thickness" as reading on "spatially different distribution of elasto-mechanical properties". Therefore, the Examiners art statement is taken to be admitted prior art.

The Applicant's emphasizes that the spatially different distribution of elasto-mechanical properties, as taught by Azima '282, "is for a different purpose...,and the Office Action has not shown...why the honey comb structure would be insufficient without the spatially different distribution, in order to obtain adequate shear strength."

However, a recitation of the intended use or purpose of the claimed limitation must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. Since the Applicant does not dispute that Azima '282 meets the structural limitation of the claim, the disclosure of Azima '282 is therefore capable of performing the intended use, that is, increasing the shear strength of the sandwich plate. And, if the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

3. Regarding the Applicant's argument that "...the Office Action does not suggest any reason why a non-uniform thickness would be obvious given that the core layer already [has] a honey comb structure."

Again, the Examiner cites Azima U.S. 6,442,282, which teaches both, a honey comb structure and selective skimming, contouring and profiling (see column 4, lines 1-11) and does so for the purpose of achieving a desired areal distribution of stiffness (see column 3, lines 62-64). The Examiner's rejection is maintained.

4. Regarding the Examiner's rejection of claim 24, the Applicant has failed to traverse the Examiner's statement that the limitations of claim 24 are unpatentable over

Azima (US 6,188,775) in view of Azima (6,442,282). Therefore, the Examiner's art statement is taken to be admitted prior art.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statements for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne Harvey whose telephone number is (703) 305-1111. The examiner can normally be reached on Monday through Friday from 8:30am to 6:00pm.

Any responses to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC 20231

or faxed to:

(703) 308-6306, for formal communications for entry

Or:

(703) 308-6296, for informal or draft communications, please label "PROPOSED" or "DRAFT".


Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor(Receptionist)

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached at (703) 305-4708.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne Harvey whose telephone number is (703) 305-1111.

D.H.

August 31, 2004


HUYEN LE
PRIMARY EXAMINER